

The working group advising the Town Administrator on the implementation of the Public Safety Communication System approved at 2017 Annual Town Meeting requests that the Selectmen schedule a Special Town Meeting for October 7 to amend the 2017 Motion and Appropriation to add \$225,000 to the original amount appropriated and to add Parcel 18-40-0 (now with the address 1110 Westford Street) to the list of town-owned properties on which the town may construct a new telecommunications tower.

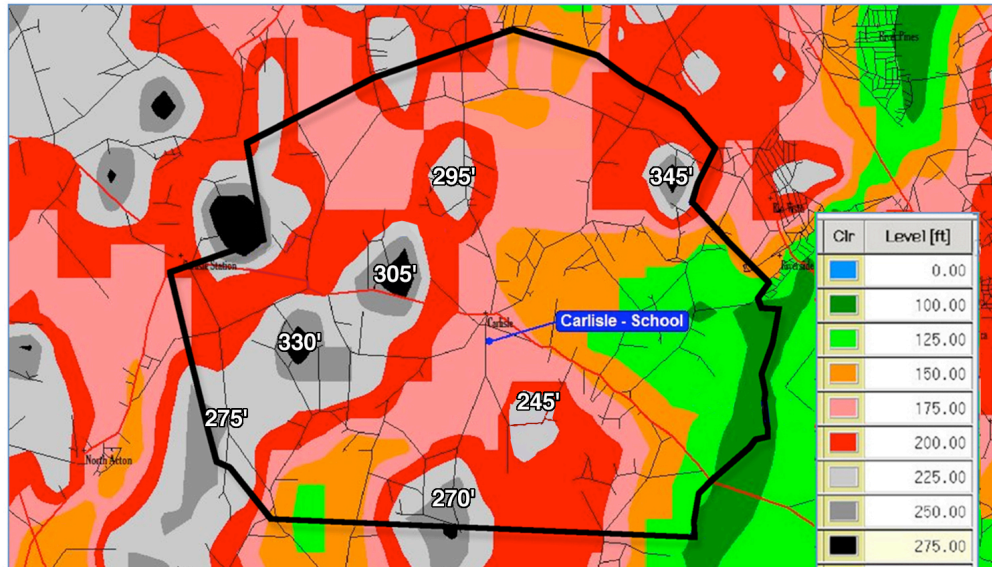
We recommend this change in the plan that was presented and approved 2+ years ago because, as explained below, we now believe that it would be foolish for the town to invest in a 10' extension of the existing commercial cellular tower to mount public safety antennas at 1022 Westford Street as was the intent until very recently. Instead we recommend that the town fund and construct a new 130' public safety tower on a town-owned parcel approximately 900 feet west of the existing privately owned tower.

We understand from our conversation with FinCom two weeks ago that it is generally expected—as a matter of fiscal prudence and fairness—that requests for appropriation are to be made at Annual Town Meeting when each appropriation can be weighed relative to other requests, and not taken individually. We therefore will explain to you why we are making this request now.

Why now?

- A. Despite our considerable efforts over two years to engage with the tower owner—by Tim, Town Counsel, and our system design consultant—we didn't know definitively until April of this year that SBA was not going to allow us to lease space on a tower extension at 1022 for a nominal fee, as we do on an SBA-owned tower at 871 Bedford Road, where the town pays \$1 a year. We also didn't know until April that the lease arrangement would have to be not just with SBA, but also separately with T-Mobile, as the 1022 site is a relative rarity in the industry where one company, SBA, controls the tower space, but another, T-Mobile controls the ground space. It was not unreasonable for us to have made the assumption we did; Town Counsel, in one of its emails with an SBA representative trying to negotiate the lease fee, noted that all of the other communities they represent pay a nominal rent to locate public safety communication equipment on towers within their towns. SO this could not have been addressed at 2019 ATM.
- B. So why not wait until next Annual Town Meeting?
 - 1. First, the state of our public safety system has been in essentially an emergency state for 5+ years. Our first responders are working with an inadequate and dangerous system. We made this case at 2017 Annual Town Meeting and Carlisle's citizens responded with near unanimous support. It is unconscionable for us to delay this further because we usually wait for ATM for appropriations.
 - 2. Second, the system cannot be made operational until we have the key components in place. A site in this western corridor is a critical component. Without a site in this area, the "dead zones" (which mean danger for first responders and potentially for citizens) in the west and the northwest of the town that were a main driver of this entire redesign, would remain. And our contract with the consulting engineer and with Motorola includes testing the system and confirming it meets the agreed-upon coverage specs. We can't do that testing piecemeal as the towers work in concert. We need to get this system up and running ASAP.

The terrain map on the next page shows the hills that create shadows where mission-critical communications fail and the coverage plot confirms that we will continue to have coverage dead zones in the west without a tower in this part of town.

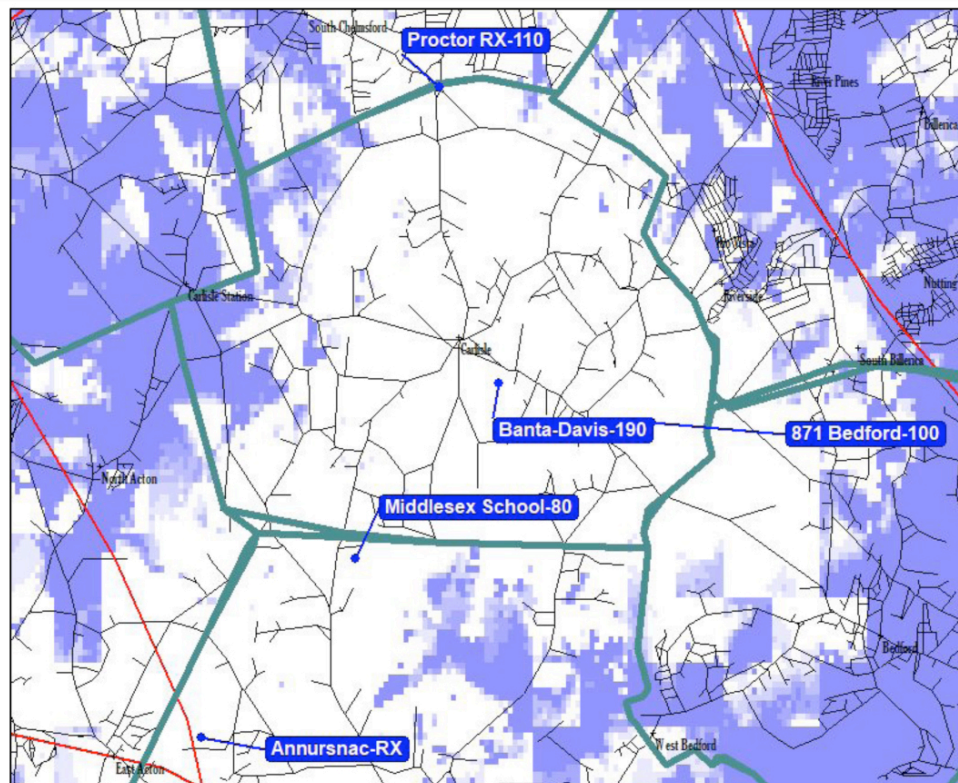


The high points to the west of Town create shadows that result in “dead zones” for radio communications.

UHF RESIDENTIAL PORTABLE [hip level]

WHITE AREA 95% - DAQ-3.0

TALKBACK: Remove 1022 - Banta Davis – 872 Bedford - Middlesex School – Proctor - Annursnac



Map-2b

White areas are acceptable coverage (3.0 DAQ 90% of the time). Purple areas are “dead zones.” The dead zones in the western part of town extending into Acton and Westford are unacceptable.

3. Third, the entire system is to be connected by fiber. The estimate to do this work is based on it being done more or less at once, within a month or so start to finish. We can't initiate that contract until we have this tower location confirmed, so any delay in this tower approval will delay the entire connectivity for the system.

4. Fourth, our contract with Motorola for the equipment (radios, pagers, etc.) included significant incentives to order everything at once, so we've had radios and pagers in hand for over a year, but because the Fire Department will, per FCC changes in frequencies available for public safety, be changing frequencies, the radios they ordered remain in their boxes, essentially daily losing some of their expected useful life due to industry practice to stop providing spare parts and service after 10-15 years. So the longer we wait, the more of our investment in radios is being wasted.

5. Fifth, although steel prices have fluctuated wildly over the past year due to unanticipated trade wars, a rule of thumb is that construction costs go up the longer you wait. If we wait 6 months for 2020 ATM, the cost for this project will likely be higher.

As it turns out, the initial \$2.9 million appropriated has yet to be bonded. As we understand it, the amount has been funded through a series of bond anticipation notes (BANs) with interest and principal payments being made, reducing the ~\$2.9 million amount by about \$200K thus far. It will be reduced by approximately \$200K more this year. The current plan with Unibank, the Town's financial adviser, is for the Town to roll over the BAN this November (adding the debt authorized at 2019 ATM for Police Station and DPW projects) and to take out a long-term bond next year for the Public Safety System appropriation for a total of approximately \$4.6 million. The additional \$225K we are requesting, if approved by Town Meeting, will part of that long-term bonding and so there will be no additional bond issuance costs for the additional appropriation.

- C. Another question posed by FinCom was whether a town investment in a new tower would be a risk, since the payback for the investment may be 20 years (and if the tower is no longer useful in that time frame, it won't have paid for itself and it also wouldn't produce the expected millions in savings over the expected life of the tower (50+ years). They wondered if it might therefore be more prudent and worth the risk to enter into a contract with SBA and T-Mobile even though we don't control the site and could lose our investment in the tower extension and our spot for this critical antenna.

Fair questions—especially given the rate of advancements in technology—but everything points towards the opposite conclusion. Early in this process we investigated other towns in the Northeast who were upgrading their systems, and all of them are making significant investments, many much greater than ours, with more redundancy and covering larger areas, in tower-based systems. Furthermore, a town's public safety communications system doesn't operate in a vacuum; we have to be able to communicate with our neighbors, so there is a huge incentive to stay with the communications technology everyone else is using. We spoke with officials involved in FirstNet, the federal government's national initiative to provide state-of-the-art seamless coverage for federal response to emergencies across the entire country. AT&T won the contract for this system and is pursuing a tower-based system. They approached us about possibly locating FirstNet antennas on the Banta-Davis tower. Also, as cellular technology progresses, from 4G to 5G to 6G and beyond, providing greater bandwidth for dramatically increased demand, they are adding, not subtracting, towers. The way radio waves travel will not change with technological change. It is line of sight and that means towers to get above tree cover.

Our entire new public safety system, from the radios and pagers to the console and the other new towers we have invested in at Banta-Davis, the Fire Station, and Proctor Road, is tower-based.

D. SO, the next big question: why do we believe our original plan to co-locate on the existing private commercial cellular tower at 1022 Westford should be abandoned?

1. As explained earlier, we have found SBA to be an unreliable partner. The SBA representatives we have dealt with over two years have changed repeatedly requiring starting from scratch just to get someone to listen. When we did finally get responses, they have consistently not supplied information critical to the questions at hand. As explained earlier, this is why it took so long to get the information we needed to make a judgment.

2. The site is unnecessarily complex, with multiple separate lease agreements required. It allows for cancellation of our lease with SBA if their lease is cancelled by T-Mobile which holds the ground lease. And as we read it, the lease also prohibits the town from communicating, negotiating, or contacting the Carlisle citizen who is the lessor for the ground and tower leases. Additionally SBA may choose not to renew our lease, without cause, on 120 days notice prior to each 5-year renewal period. And the underlying lease with the landowner allows SBA to cancel that lease within 30 days notice of any renewal period without cause and separately to cancel the lease with the landowner with 90 days notice if they determine the site no longer serves its needs for either economic or technological reasons. Separately and collectively these terms and overlapping uncertainties have led us to conclude that it would be foolish for the Town to stake the fundamental effectiveness of its entire system on this location.

3. The site is not particularly lucrative for SBA, hence their unwillingness to give Carlisle the standard nominal rent rate. They have offered us a discount off their initial offer, which we believe was already somewhat lower than their standard commercial lease rate (based on what AT&T was paying to reserve the right to lease an extension). There is one tenant and they are the company that controls the ground lease. In the dozen years since the tower was built, despite occasional interest shown by other carriers, none has deemed the coverage it would provide worth the cost (and we know that there are gaps in cell coverage all over Carlisle). This is one reason we had confidence the extension would be available to us when we planned the system. The tower is not very tall, barely extending above the trees. The 10-foot extension is necessary for us to achieve the barely acceptable coverage it would provide. With tree growth, it is quite conceivable that SBA/T-Mobile might find they need the higher position. Lower on the tower would not work for the Town.

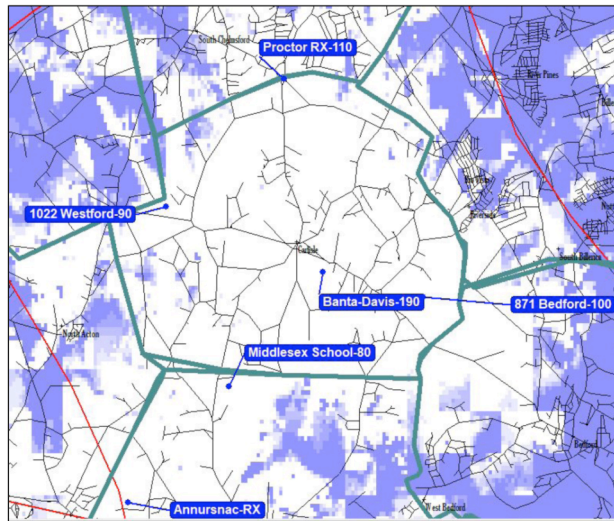
In contrast, the SBA-owned 190-ft tower at 871 Bedford (at that height because it was determined by a court order rather than through a standard Special Permit under our wireless bylaw) represents much greater investment (and because it came through a court order would not be easy to duplicate in Carlisle), and with 4 commercial tenants each getting much greater area coverage because of the much greater height than that provided by 1022 Westford, most likely provides many, many times more revenue for SBA than 1022 does. Carlisle's public safety antenna is well below the commercial carriers' antennas; none would seek to displace us. And apparently the nominal rate for the Town's public safety antenna is ensured through the lease agreement with the landowner.

4. Finally, the lease rental proposed is not within our budget and we believe would not make economic sense for the Town even if all the above complications didn't preclude, in our opinion, the Town entering into lease on this site. As noted back in May and again two weeks ago when we reviewed this with FinCom, we are not financial experts, and we accept that interest costs and possible maintenance costs on a Town-owned tower (though they are basic unpainted galvanized steel and we have been advised that maintenance required is minimal, confirming the tightness of the bolts every 5 years or so) might increase to 20 years the payback for the \$225K higher initial investment. But the expected life of this tower is at least 50 years, and with proper maintenance,

perhaps well beyond that, would save the town millions. We are seeking a \$225,000 additional appropriation on a \$3 million project. Without this, much of the \$3 million will have been wasted.

- E. Aside from the long-term cost savings and not having to deal with the overwhelming negatives at 1022, the new site will provide better coverage both within Carlisle's borders and significantly better coverage within neighboring towns. This is not surprising given that the Town-owned site is at a higher elevation than 1022 and that we are proposing a higher tower.

TALKBACK: Banta Davis – 1022 - 872 Bedford - Middlesex School – Proctor - Annursnac



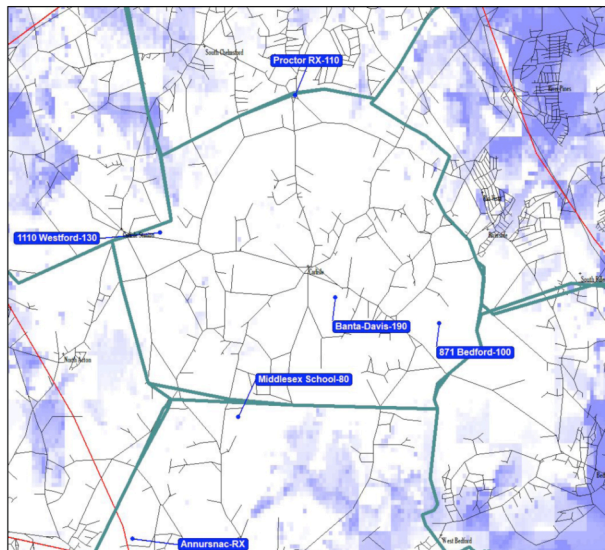
Map-1b

Plot at left is Talk-back of system as originally planned with Town antennas on 10 foot extension of existing 80' tower.

Note pockets of less-than ideal coverage in Carlisle. Also note the areas in Westford to our NW where coverage is bad. This would impact mutual aid between the towns, with Westford first responders likely not able to hear directives from Carlisle to alert them en route of what to expect.

We sacrificed ideal coverage with the plan we put forward at 2017 ATM.

TALKBACK: Replace 1022 with 1110 Banta Davis - 872 Bedford - Middlesex School – Proctor - Annursnac



Map-3b

With a 130' Tower at 1110 Westford instead of the 1022 co-location, note better coverage in Carlisle (closer to ideal coverage throughout town).

Also note much improved coverage in ALL adjacent towns for mutual aid.

These improvements are significant. And important.

And worth the additional investment.

CONCLUSION

We acknowledge that we have failed to execute the plan we presented in 2017. We had hoped to have it completed well before now. The project timeline summary we provided separately shows how hard we have collectively worked to get the job done.

And we understand that a request for a Special Town Meeting should not be taken lightly. And we don't take it lightly.

And we understand that the homes of a small number of citizens in this part of town will be relatively near two towers. That said, only two homes are between 500 and 600 feet from the existing tower (not counting the landowner on whose property the tower is sited); all others are over 1000 feet from it, the vast majority fully or mostly screened from both.

There is no comparison between what we are proposing here and the towers in our initial proposal that provoked such a powerful response from so many citizens that we abandoned that proposal. The initial proposal included two towers literally in the very center of dense subdivision neighborhoods, the entire ground equipment enclosure and the entire tower unscreened and encompassing the entire traffic island in the middle of Heald and Judy Farme Roads and another in a traffic island on Autumn Lane, roads traveled by residents daily.

The proposed new tower is completely consistent with the new towers already built and approved almost unanimously at 2017 ATM. The proposed new tower is further from the road (and will be better screened at its base) than the new tower at Proctor Road. The proposed new tower has no homes within 300', whereas both Proctor Road and the Fire Station towers have homes as close or closer than 300'.

We wish we didn't have to make this change; we tried to make the original plan work. But it will not work.

As you may be aware, one of the abutters to the proposed site has filed an appeal with DEP of ConsCom's decision and Order of Conditions. DEP has accepted the appeal and has scheduled a site visit for Friday of this week. We are confident that ConsCom's decision was well considered and consistent with state and local wetlands statutes/bylaws and that if DEP does issue a superceding order of conditions the project will still be able to proceed. There is no absolute timeline for a decision from DEP or any steps that the Town and ConsCom may have to take subsequently, but our expectation is that this will be resolved in a timely manner and in no way should preclude the scheduling of a Special Town Meeting.

We know it is no solace to those who oppose this proposed new tower, but it is pretty close to miraculous that there is only one Town-owned non-conservation parcel in the entire western part of town and it is in almost precisely the best location to complete the required mission critical coverage we owe it to our first responders to provide. We feel confident that with your support and the support of FinCom, Town Meeting will agree.

Thank you.